

REMARKS

I. Status of the Claims

Claims 15, 16, and 18-26 are currently pending in this application. Claims 1-14 and 17 have been canceled, claims 15 and 16 have been amended, and new claims 18-26 have been added. No new matter has been introduced by this Amendment.

II. Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1-17 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully disagree with these rejections and traverse for at least the following reasons.

To satisfy the statutory requirement of definiteness, Applicants' claims need only apprise one of ordinary skill in the art of their scope with a reasonable degree of certainty. M.P.E.P. § 2173.02. As is explained below, Applicants claims as-filed and as-amended satisfy this requirement.

Claim 1 (now incorporated into new claims 15 and 16) has been rejected as allegedly unclear. First, the Examiner questions how the cellulose ester film can comprise a different type of polymer and simultaneously be a cellulose ester film, because the claim recites "a cellulose ester film comprising a polymer...." Applicants now recite in both claims 15 and 16 "a cellulose ester film comprising a cellulose ester and a polymer...." This Amendment is supported by, for example, the Examples and page 22, lines 1-4, of the specification as-filed. Second, the Examiner alleges that the

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term "functional group" in the context of now-canceled claim 1 was unclear. Applicants' Amendment, however, has rendered moot this ground for rejection.

Claims 2-3 (now incorporated respectively into claims 18 and 19) have been rejected as allegedly unclear whether the amount of monomer is the percentage based on the polymer or the film. Applicants respectfully submit that the monomer, which is contained in the polymer, is present in an amount expressed in weight percent based on the polymer. For example, the specification provides "[t]he polymer in the invention containing a methyl acrylate monomer in an amount of not less than 30 weight % is preferable in providing good water resistance." (Specification, page 25, lines 1-4.) Thus, one of ordinary skill in the art would be reasonably apprised, especially when read in light of the specification, that the expression of weight percent of the monomer is relative to the weight of the polymer.

Applicants have canceled claims 6, 12, 13, and 14, thus, rendering moot the grounds for rejection of these claims.

In light of Applicants' amendments and remarks detailed above, Applicants respectfully request withdrawal of all of the 35 U.S.C. § 112, second paragraph, rejections.

III. Rejections Under 35 U.S.C. § 102

Claims 1-11 and 14 stand rejected under 35 U.S.C. § 102 as allegedly anticipated by U.S. Patent No. 4,023,977 to *Mercurio*. Applicants have canceled claims 1-11 and 14, thus, rendering moot this ground for rejection.

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IV. Rejections Under 35 U.S.C. § 103

Claims 12-13 and 15-16 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 4,715,686 to *Iwashita* in view of U.S. Patent No. 4,023,977 to *Mercurio*, and claim 17 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 4,023,977 to *Mercurio*. Claims 12-13 and 17 have been canceled, thus, rendering moot their grounds for rejection. Applicants respectfully disagree with and traverse the rejection of claims 15 and 16 for at least the following reasons and further in view of the enclosed 37 C.F.R. § 132 Declaration.

The Examiner alleges that, in light of the teachings of the cited references, it would have been obvious for one of ordinary skill in the art to have used the cellulose ester film of *Mercurio* as the cellulose ester protective film in the polarizing plate laminate of *Iwashita*. To establish a *prima facie* case of obviousness, however, the Examiner bears the burden of showing at least that there exists some suggestion or motivation to combine the reference teachings and that there would be a reasonable expectation of success in such a combination. M.P.E.P. § 2143. The primary reference, *Iwashita*, is deficient in that it fails to teach a cellulose ester film containing a methyl acrylate polymer. The Examiner's reliance upon *Mercurio*, however, is insufficient to fill this void. Accordingly, Applicants respectfully submit that neither a motivation to combine nor a reasonable expectation of success has been established.

Iwashita merely teaches a liquid crystal display (see Example 5) and a polarizing plate, each employing a conventional cellulose ester film (see Example 8). *Mercurio* teaches a cellulose ester film with a polymer of less than 5,000 weight average molecular weight comprising methyl acrylate monomer, which can be used for coatings

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in order to lower the melting point and improve the flow of hard, high molecular weight polymers (see column 1, lines 8-11). The references lack the requisite motivation to combine, however, because *Iwashita* does not teach or suggest the use of a cellulose ester film containing any additive such as a plasticizer, much less a cellulose ester as-claimed, and because *Mercurio* fails teach or suggest application of a cellulose ester film to a polarizing plate or a liquid crystal display as is claimed. Thus, contrary to what the Examiner contends, one of ordinary skill in the art would not have been motivated to combine these reference teachings to obtain the claimed invention.

Additionally, Applicants note that numerous plasticizers of polymers are known in the art, and it is difficult to expect what kinds of plasticizers can provide the excellent results of the present invention. Thus, even if the references were properly combined, which they are not, one of ordinary skill in the art would not have been presented with a reasonable expectation of success of such a combination. For example, the main object of *Iwashita* is to provide a display device including a glass plate that has been treated against reflection and has been caused to adhere to the front surface of a light-passive liquid crystal display device element by the use of a material which has substantially the same index of refraction as the materials of the glass plate (see column 2 , lines 12-16). The present invention, however, provides a polarizing plate or a liquid crystal display containing a cellulose ester film as-claimed which provides the excellent results of the invention as shown in Table 1 on page 100 of the specification, i.e., excellent retardation, excellent retention property, excellent moisture vapor permeability, and minimization of foreign materials or stains. As is apparent from the above, the object of the invention is quite different from that of *Iwashita*. Thus, it would

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not have been obvious to one of ordinary skill in the art to attain the invention over *Iwashita* in view of *Mercurio* with an expectation that the excellent retardation, excellent retention property, excellent moisture vapor permeability, and minimization of foreign materials or stains as described above would be attained.

To further support the unexpected results of the invention, additional comparative tests were carried out employing various plasticizers. The results are shown in the executed 37 C.F.R. § 132 Declaration enclosed herewith.

As is apparent from Table 3 of the Declaration, the inventive polarizing plate samples 9, 10, and 11 provide excellent retardation, excellent retention property, excellent moisture vapor permeability, excellent minimization of foreign materials or stains, and excellent durability, as compared with the comparative polarizing plate samples 12 and 13, which employ the cellulose ester film containing compounds other than the polymer of the invention, and as compared with the comparative polarizing plate sample 15, which employs the cellulose ester film containing no plasticizer. These results would have been unexpected to one of ordinary skill in the art, even in light of the cited reference combination of *Iwashita* in view of *Mercurio*. Accordingly, as the Examiner has failed to establish a *prima facie* case of obviousness and further in consideration of the unexpected results supplied by Applicants, Applicants respectfully request withdrawal of the 35 U.S.C. § 103 rejections.

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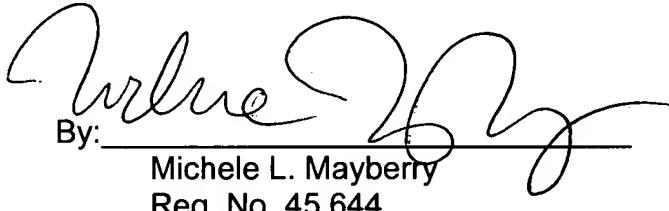
V. Conclusion

In view of the foregoing Amendment and Remarks, Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: 
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Reg. No. 45,644

Dated: June 18, 2003

Enclosure: 37 C.F.R. § 132 Declaration

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

123-2113
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JUN 19 2003
TC 1700

U.S. Patent

Application of: K. SHIMIZU

Serial Number : 09/900,961

Filed : July 10, 2001

For : CELLULOSE ESTER FILM, CELLULOSE ESTER DOPE,
PROTECTIVE FILM OF POLARIZING PLATE AND POLARIZING PLATE

Group Art Unit: 1772

Examiner : Sow-Fun Fon

DECLARATION UNDER 37 C.F.R. 1.132

Hon. Commissioner of Patents

and Trademarks

Washington, D.C. 20231

Sir:

I, KUNIO SHIMIZU, hereby declare and say as follows:

That I am a post graduate from Hokkaido University
having been awarded a Masters Degree in Technology in March
1980.

That since April 1886, I have been employed by Konica
Corporation, the owner of the above-identified application.
During my employment, I have been engaged in the research
and the study of polarizing plate materials in the Research
and Development Laboratory of my company.

That I am a sole inventor of the present application.

That I am familiar with the subject matter of the
present invention.

What follows is an accurate summary of experiments conducted according to my detailed instructions and under my personal supervision, and the results obtained therefrom.

Comparative tests

1. Iwashita et al. discloses the use of a cellulose triacetate film in the polarizing plate of the EXAMPLE 8, however, Iwashita et al. does not disclose a cellulose ester film containing any additive such as a plasticizer, much less a cellulose ester containing a specific polymer as claimed.

Mercurio et al. teaches the cellulose ester film with the polymer of less than 5,000 weight average molecular weight comprising methyl acrylate monomer, but does not disclose application of the cellulose ester film to the polarizing plate or the liquid crystal display as claimed.

Neither Iwashita et al. nor Mercurio et al. discloses the excellent results of the invention that provide excellent retardation, excellent retention property, excellent moisture vapor permeability, minimization of foreign materials or stains or durability, as shown in Table 1 on page 100 of the Specification.

2. In order to further show the unexpected results of the invention, additional comparative tests were carried out referring to Iwashita et al. and Mercurio et al.

Polarizing plate samples 9, 10, and 11 were prepared in the same manner as in Examples 9, 10 and 11 of the Specification, respectively. Comparative polarizing plate samples 12 and 13 were prepared in the same manner as in Comparative Examples 1 and 2 of the Specification,

respectively. Further, Comparative polarizing plate sample 15 (corresponding to Example 8 of Iwashita et al.) was prepared in the same manner as in Comparative Example 1 of the Specification, except that triphenyl phosphate was not used in the dope composition 12. Polarizing plate samples 9, 10, and 11 employed the film sample containing as a plasticizer the polymer falling within the scope of the invention. Polarizing plate samples 12 and 13 employed the film sample containing as a plasticizer the compound falling outside the scope of the invention. Polarizing plate sample 15 employed the film sample containing no plasticizer. The resulting samples were evaluated for retardation, retention property, moisture vapor permeability, foreign materials or stains and durability in the same manner as in Examples of the Specification.

The results are shown in Table 3.

Table 3

Polari-zing plate sample No.	Film sample used	Plast-icizer used	Retar-dation (nm)	Reten-tion pro-perty (%)	Moisture vapor permea-bility (g/m ² ·24 hr)	Foreign materials or stains (rating)	Dura-bility (rating) of polarizing plate
9 (Inv.)	9	Poly-mer 9	9	0.4	200	A	B
10 (Inv.)	10	Poly-mer 10	18	1.2	240	A	A
11 (Inv.)	11	Poly-mer 11	16	1.5	230	A	A
12 (Comp.)	12	TPP	35	7.0	290	C	D
13 (Comp.)	13	EPEG	28	3.0	320	C	D
15 (Comp.)		None	28	0.2	450	A	D

Inv.: Invention, Comp.: Comparative. TPP: Triphenyl phosphate, EPEG: ethylphthalyl ethyl glycolate

As is apparent from Table 3 above, Inventive polarizing plate samples 9, 10 and 11 provide excellent retardation, excellent retention property, excellent moisture vapor permeability, excellent minimization of foreign materials or stains, and excellent durability, as compared with the comparative polarizing plate samples 12 and 13 employing the cellulose ester film containing compounds other than the polymer falling within the scope of the invention or the comparative polarizing plate sample 15 employing the cellulose ester film containing no plasticizer. These results are unexpected to one of ordinary skill in the art.

In view of the above, it would not have been obvious to one of ordinary skill in the art to attain the invention over Iwashita et al. in view of Mercurio et al.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001, of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: May, 10, 2003

Kunio Shimizu
KUNIO SHIMIZU